AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-15 (Canceled).

16. (Currently amended) An immersion sensor for measuring the concentration of at least one analyte with the aid of an oxidase, wherein said immersion sensor comprises said oxidase in an enzyme region coupled on at least one side to an analyte-impermeable, oxygen-permeable membrane having no analyte window or channel, said enzyme region connected to the surface of the sensor via at least one channel which contains water and is permeable to the analyte.

17. (Original) The immersion sensor as set forth in claim 16, wherein the enzyme region contains water.

18. (Previously Presented) The immersion sensor as set forth in claim 16, wherein the at least one channel leads through an impermeable material of the immersion sensor.

19. (Previously Presented) The immersion sensor as set forth in claim 17, wherein said at least one channel is filled, adjacent to the surface of the sensor, with a porous substance which is impermeable to proteins.

20. (Previously Presented) The immersion sensor as set forth in claim 17, wherein on the surface of the sensor, the channel passes into a protein-impermeable, hydrophilic layer.

Claims 21- 23 (Canceled).

24. (Previously Presented) The sensor according to claim 16, wherein the sensor is configured such that the analyte diffuses into the enzyme region.

25. (Previously Presented) The sensor according to claim 16, wherein the enzyme region is an enzyme layer.

Claim 26 (Canceled).

27. (Previously Presented) The sensor according to claim 16, wherein a length of the channel exceeds a thickness of the membrane.

28. (Currently amended) The sensor according to claim 16, wherein the enzyme ~~layer~~ region borders an inner gas space of the sensor from within.

29. (Previously Presented) The sensor according to claim 28, wherein the inner gas space is connected to an oxygen reservoir.

30. (Previously Presented) The sensor according to claim 28, wherein the analyte-impermeable, oxygen-permeable membrane having no analyte window is situated between the enzyme layer and the inner gas space.

Claim 31 (Canceled).

32. (Previously Presented) The sensor according to claim 16, wherein the channel forms the only way of transporting analyte to the enzyme.

33. (Currently amended) The sensor according to claim 16, wherein a diffusion resistance of the analyte in said channel is determined by a ratio of a length of the ~~diffusion~~ channel and a cross-section of the ~~diffusion~~ channel.

34. (Previously Presented) The sensor according to claim 16, wherein a length of the channel is between 0.1 mm and 1 mm.

35. (Currently amended) The sensor according to claim 16, wherein said surface of said sensor comprises a porous layer, said porous layer providing an increased surface area for diffusion into ~~cross-section of~~ the channel, whereby outer concentration gradients level out thereby reducing the effect of outer deposits on diffusion flow.

36. (Previously Presented) The sensor according to claim 16, wherein the channel passes into a hydrophilic, porous and protein-excluding layer.

37. (Previously Presented) The sensor according to claim 16, wherein the channel leads through a water-impermeable material and at a surface of the sensor is filled with a hydrophilic porous substance.

38. (New) The sensor according to claim 16, wherein the membrane comprises a substantially continuous membrane.

39. (New) An immersion sensor for measuring the concentration of at least one analyte with the aid of an oxidase, wherein said immersion sensor comprises said oxidase in an enzyme region coupled on at least one side to a substantially continuous analyte-impermeable, oxygen-permeable membrane, said enzyme region connected to the surface of the sensor via at least one channel which contains water and is permeable to the analyte.

40. (New) The sensor according to claim 39, wherein said membrane comprises a membrane having no analyte window or channel.